Inventor(s): Shuijun Lu ARC-P123 1/12

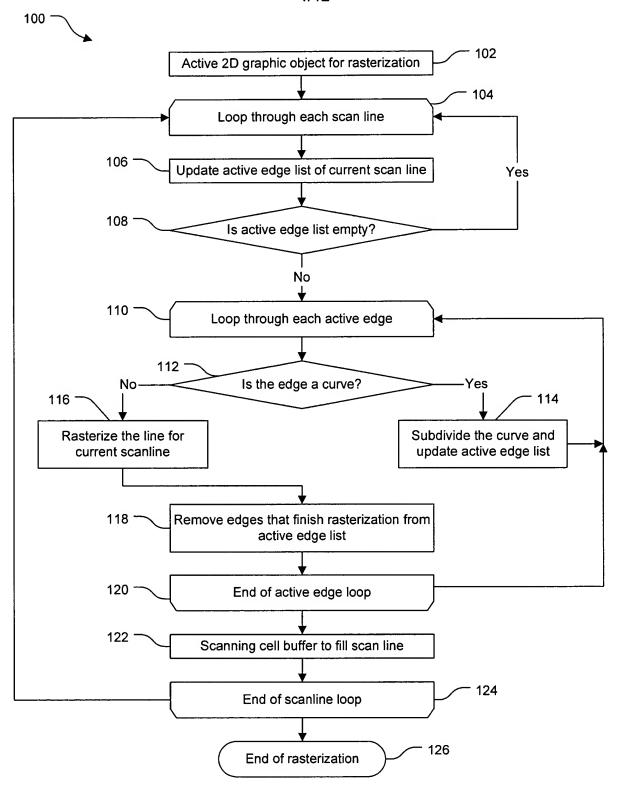


Fig. 1

Inventor(s): Shuijun Lu ARC-P123 2/12

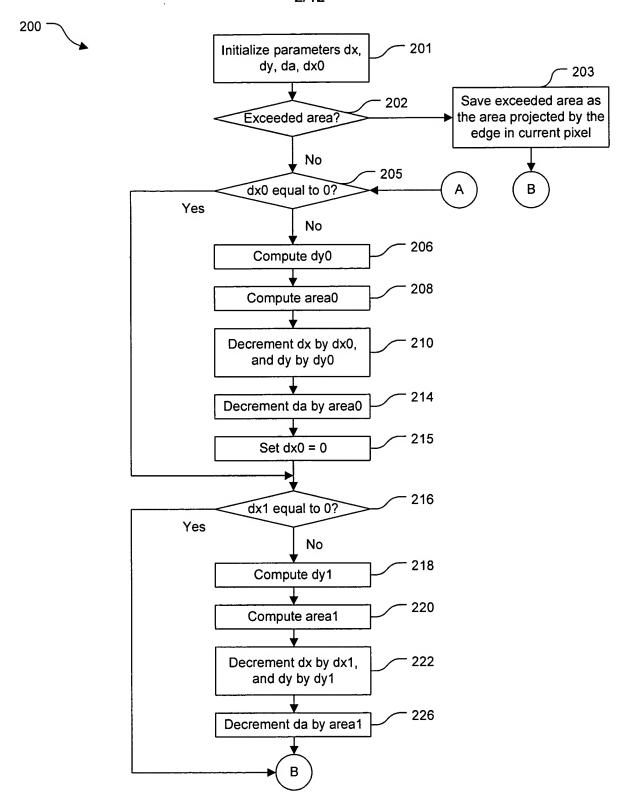


Fig. 2A

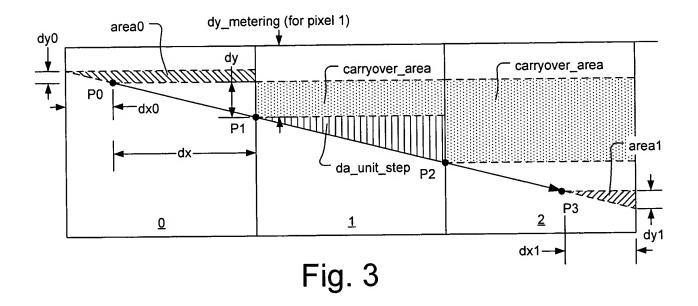
Inventor(s): Shuijun Lu ARC-P123 3/12 200 -Increment da by 228 carryover_area Move to next pixel by 230 incrementing x_current by dx, and y_current by dy 234 Increment dy_meter by dy 238 dy meter > GF ONE? Yes No 239 Set flag for sum fill Save da as the area projected 246 by the edge in current pixel Decrement dy_meter by 240 247 GF_ONE Decrement dx_left by dx 242 Compute area_exceeded Yes 248 dx_left is equal to 0? 244 Decrement da by area_exceeded No Compute dx1 if the next pixel is 250 Save da as the area projected 245 the last pixel the edge touches by the edge in current pixel 251 Increment carryover_area by 245A Save area_exceeded for the dy next scan line 252 Reinitialize dx, dy, da Update carryover_area for the 245B next scan line 254

Title: "GRAPHIC ENGINE FOR FILL STYLE TRANSFERRING IN A RESOURCE-CONSTRAINED DEVICE"

Fig. 2B

End rasterization

Inventor(s): Shuijun Lu ARC-P123 4/12



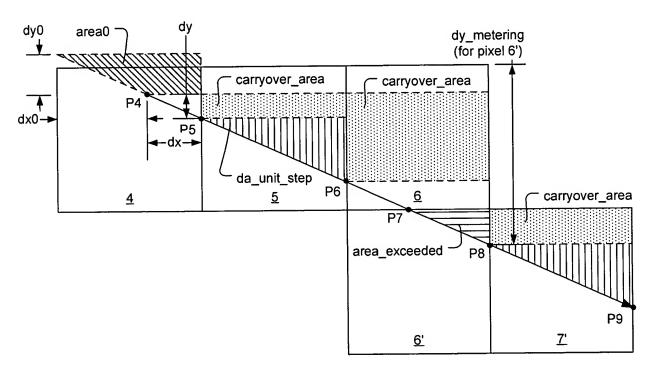


Fig. 4

Title: "GRAPHIC ENGINE FOR FILL STYLE TRANSFERRING IN A RESOURCE-CONSTRAINED DEVICE" Inventor(s): Shuijun Lu ARC-P123 5/12

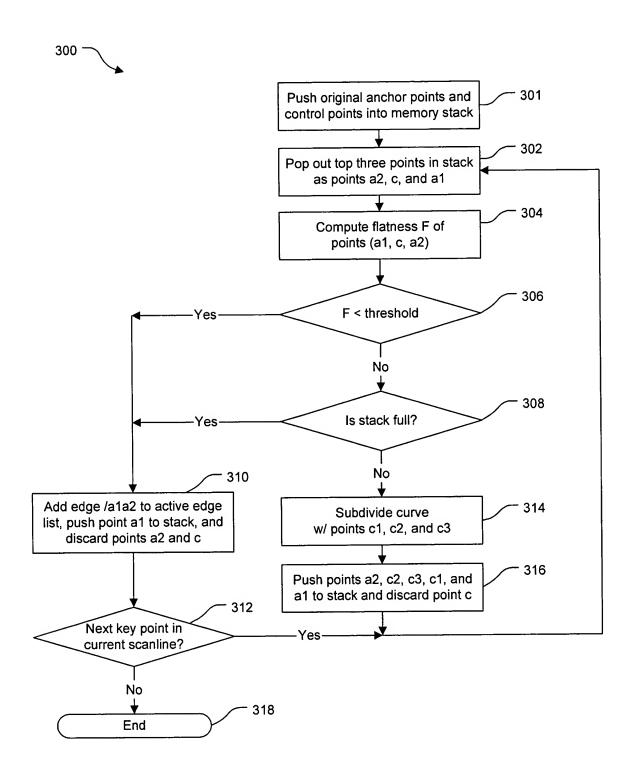


Fig. 5

Inventor(s): Shuijun Lu ARC-P123 6/12

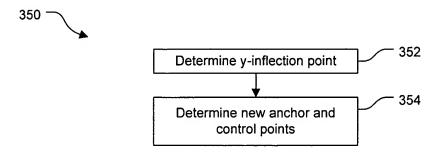


Fig. 6

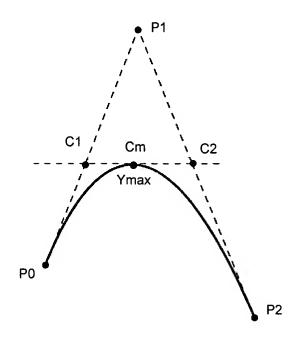
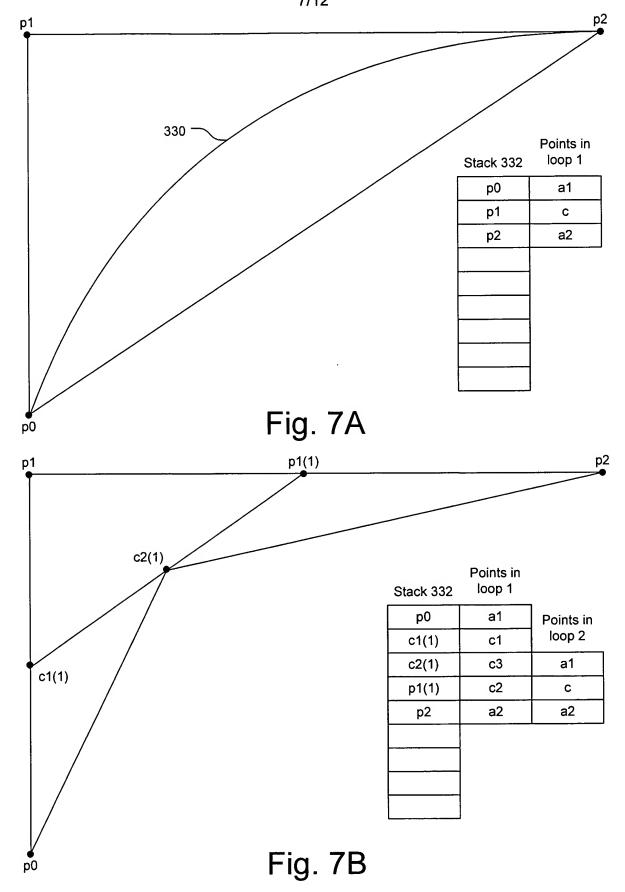


Fig. 6A

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Inventor(s): Shuijun Lu ARC-P123 8/12

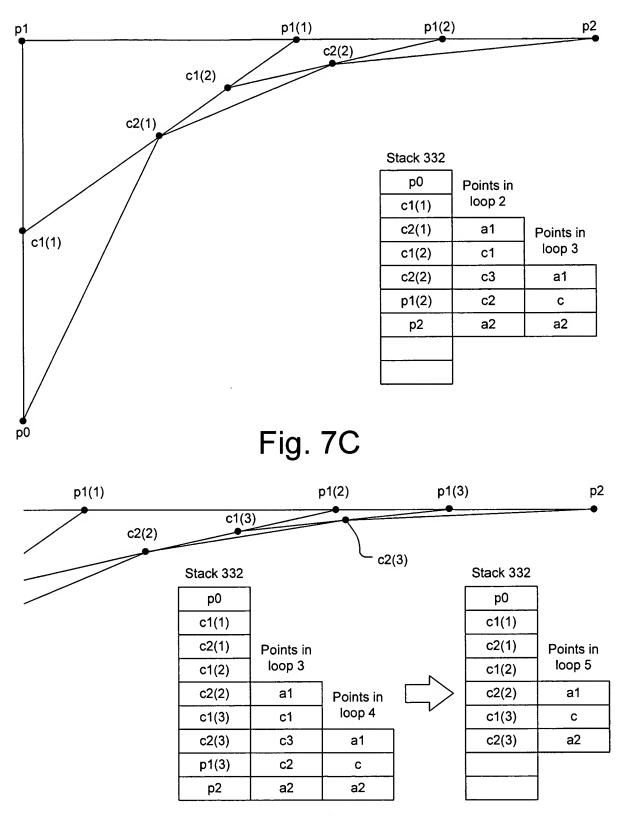


Fig. 7D

Inventor(s): Shuijun Lu ARC-P123 9/12

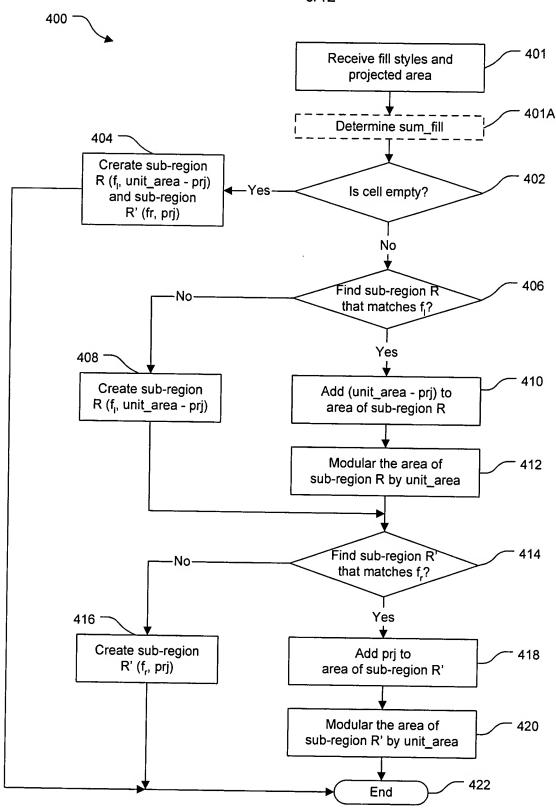
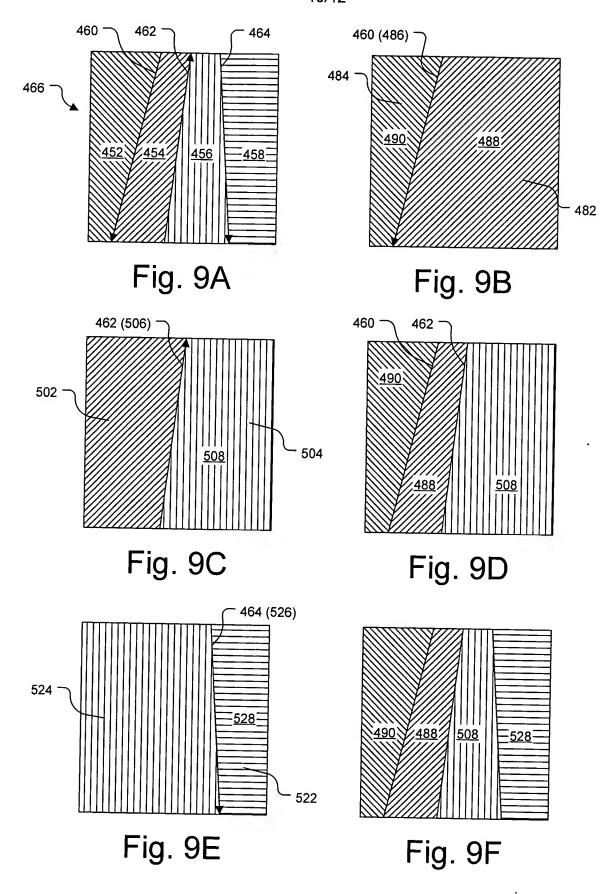


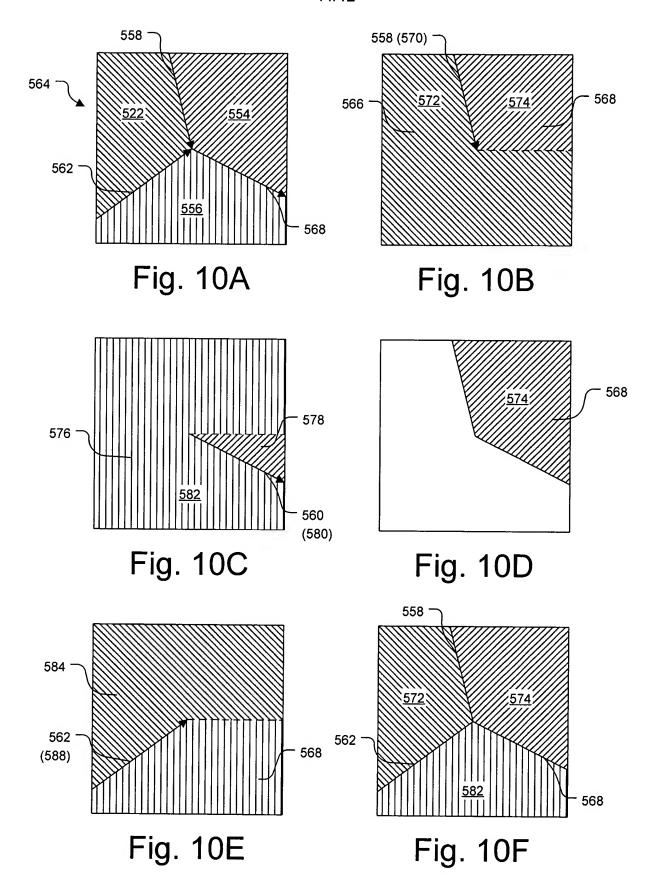
Fig. 8

Inventor(s): Shuijun Lu ARC-P123 10/12



Title: "GRAPHIC ENGINE FOR FILL STYLE TRANSFERRING IN A RESOURCE-CONSTRAINED DEVICE" Inventor(s): Shuijun Lu

ARC-P123 11/12



Title: "GRAPHIC ENGINE FOR FILL STYLE TRANSFERRING IN A RESOURCE-CONSTRAINED DEVICE" Inventor(s): Shuijun Lu ARC-P123 12/12 401A -614 615 sum_fill += $(f_r - f_i)$ Flag for sum_fill set? Yes-616 Nosum_fill += 0 Fig. 11A 600 602 Sub-pixel regions? -No-606 Yes 610 604 Fill pixel with fa fill Next pixel cell sytle fa += sum fill 608 Last pixel cell? Yes * 612 End Fig. 11B 1 2 3 4 5 6 8 - 632B 624 628 618 f0 f2/ fO. f0 f0 626 630 632A 4 630 7 f0, a0 f1, a2 f2, a5 f3, a8 f1, a1 f0, a3 f0, a6 f0, a9 f2, a4 f3, a7 sum fill sum fill sum_fill sum_fill = f1= f2 - f1= 60 - 62= 0

Fig. 12

fa = f2

fa = f2

fa = f0

fa = f0

fa = f0

fa = f1

fa = f1

fa = f1